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GRAND ROUNDS IN ENVIRONMENTAL MEDICINE

Hypersensitivity Pneumonitis Associated with Environmental Mycobacteria

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Abbreviations with definitions used in the manuscript:

FEV_1 = Forced expiratory volume in 1 second in liters ; FVC = Forced vital capacity in liters; D_LCO = diffusing capacity for carbon monoxide; rest O_2 sat = Oxygen saturation at rest; Exert O_2 Sat = Oxygen saturation with exertion

Outline of Section Headers

- Abstract
- Case Presentation
- Discussion
- Conclusion
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Abstract

A previously healthy man working as a machine operator in an automotive factory developed respiratory symptoms. Medical evaluation showed abnormal pulmonary function tests, a lung biopsy showed hypersensitivity pneumonitis, and his illness was traced to his work environment. His physician asked the employer to remove him from exposure to metal working fluids. Symptoms re-occurred when he was later re-exposed to metal working fluids, and further permanent decrement in his lung function occurred. Investigation of his workplace showed that five of six large reservoirs of metal working fluids (cutting oils) grew *Mycobacterium chelonae (or M. immunogenum)*, an organism previously associated with outbreaks of hypersensitivity pneumonitis in auto making factories. His lung function has remained stable with complete removal from exposure. The employer, metal working fluid supplier, union, and the National Institute for Occupational Safety and Health were notified of this sentinel health event. No further cases have been documented in this workplace.